



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,330	04/13/2004	Dale H. Buermann	PEN-108/US	5397

7590 06/20/2006
LUMEN INTELLECTUAL PROPERTY SERVICE INC
2345 YALE STREET
2ND FLOOR
PALO ALTO, CA 94306

EXAMINER

RATCLIFFE, LUKE D

ART UNIT PAPER NUMBER

3662

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/824,330	Applicant(s) BUERMANN ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 15, 18-22, 29, and 32 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Beliveau (6545751).

Referring to claims **1, 18, 19, and 32**, Beliveau shows a beam generation unit (figure 1 Ref 10), a radiation detection unit (figure 4 ref 188), a rotation mechanism (figure 3), and a determination unit (figure 3 Ref 3).

Referring to claims **2 and 20**, Beliveau shows at least one of the reference path and the first path further comprise a non-collinear folded path portion (figure 1).

Referring to claims **3 and 21**, Beliveau shows a rotation mechanism that comprises at least one element selected from a group consisting of mirrors, refractive elements, diffractive elements and holographic elements (figure 1).

Referring to claims **4 and 22**, Beliveau shows a reference path and a first path that are in a common plane (figure 1).

Referring to **claim 5**, Beliveau shows a determination unit that comprises a detector for detecting the reference beam and the first beam (figure 4).

Art Unit: 3662

Referring to **claims 15 and 29**, Beliveau shows an angular velocity unit for measuring the angular velocity of the reference beam, the angular velocity unit being in communication with the determination unit (column 2 line 29-49).

Referring to **claim 6**, Beliveau shows a reference source for launching the reference beam and a first source for launching the first beam (column 2 line 29-49).

Referring to **claim 7**, Beliveau shows an active array of sources (column 2 line 29-49).

Claims 17 and 31 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Orman (5767960).

Referring to claims 17 and 31, Orman shows a beam generation unit that generates a reference beam a first beam and a second beam (figure 1), a rotation mechanism (figure 5), and a determination unit (column 2-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 14, 16, and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beliveau (6545751) in view of Orman (5767960).

Referring to **claim 12 and 25**, Beliveau shows a beam generation unit (figure 1 Ref 10), a radiation detection unit (figure 4 ref 188), a rotation mechanism (figure 3),

Art Unit: 3662

and a determination unit (figure 3 Ref 3). However Beliveau does not show a second beam.

Orman shows a beam generation unit that generates a reference beam a first beam and a second beam (figure 1), a rotation mechanism (figure 5), and a determination unit (column 2-3). It would have been obvious to have the second beam because it gives the system a redundancy in its measurements.

Referring to **claim 14 and 28**, it would be obvious to have the second source in the same plane as the first source and in the same plane as the reference beam because this is what the reference shows.

Referring to **claims 16 and 30**, it would be obvious to use a micro-structure as a target because this is a common target and Beliveau teaches a multitude of targets included, but not specifically, is a micro-structure.

Claims 7-11 13, 23, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beliveau (6545751) in view of Korah (6115111).

Referring to **claim 7 and 13**, Beliveau shows a beam generation unit (figure 1 Ref 30), a radiation detection unit (figure 1 Ref 46), a rotation mechanism (figure 1 Ref 35), and a determination unit (figure 2). However Beliveau does not show a beam generation unit that comprises an active array of sources.

Korah shows an apparatus for determining distance that includes using an active array of sources (column 1 lines 10-45). It would have been obvious to use an active array of sources because multiple beams are needed in order to have the device work and an array can supply the multiple beams.

Referring to **claims 8, 23, and 26**, Beliveau shows a beam generation unit (figure 1 Ref 30), a radiation detection unit (figure 1 Ref 46), a rotation mechanism (figure 1 Ref 35), and a determination unit (figure 2). However Beliveau does not show a beam generation unit that comprises an active array of sources.

Korah shows an apparatus for determining distance that includes using an active array of sources that is able to endow the reference beam and the first beam with mutually distinguishing properties (column 1 lines 10-45). It would have been obvious to modify Beliveau to include the mutually distinguishing properties taught by Korah because this allows the detector to distinguish the first beam from the reference beam and to recognize both of them from ambient light.

Referring to **claims 9, 24, and 27**, Korah shows a distinguishing property that is selected from the group consisting of polarization, wavelength, temporal beam format, and intensity (column 1 lines 10-45).

Referring to **claim 10**, Korah shows a distinguishing property being wavelength. It would be obvious with the combination of Beliveau and Korah to include a wavelength filter in the detector because without the filter the transmission in wavelength would be useless.

Referring to **claim 11**, Beliveau shows a determination unit that comprises a reference detector for detecting the reference beam and a first detector for detecting the first beam (figure 3).

Conclusion

Art Unit: 3662

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

Art Unit: 3662

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

LDR



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600